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# Items of Interest in Seed Control Fall 2000

United States  
Department of  
Agriculture

Marketing and  
Regulatory  
Programs

Agricultural  
Marketing  
Service

Livestock and Seed  
Program

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Seed Regulatory and Testing Branch  
Room 209, Building 306, BARC-East  
Beltsville, Maryland 20705-2325  
Regulatory: 301-504-9430; Fax 301-504-8098  
Testing: 301-504-8089; Fax 301-504-8098  
<http://www.ams.usda.gov/lsg/seed/lsg-sd.htm>





## HIGHLIGHTS OF FISCAL YEAR 2000 ACTIVITIES

These are some highlights of Seed Regulatory and Testing Branch (SRTB) activities during fiscal year 2000 (October 1, 1999, through September 30, 2000).

We received 493 Federal Seed Act (FSA) complaints and made 601 FSA cases. A complaint results in more than one FSA case if the seed was shipped in interstate commerce more than once. During the fiscal year we closed 563 cases. We wrote warning letters for 258 cases, settled 150 cases with monetary penalties totaling \$77,200, waived monetary penalties on 20 cases, and held 9 cases in abeyance pending the future performance of the companies involved. We did not take FSA action on 126 cases for reasons including no violation of the FSA was established and because of a company's operational status. We ended the fiscal year with action pending on 616 cases.

Our Testing Section received 4,621 samples including 2,563 FSA samples, 191 identification and verification tests, and 1,867 fee-based service samples.

Other highlights include:

- SRTB staffers conducted a three-day Federal Seed Analyst School in Oregon.
- A staff member served as a technical assessor for a quality assurance audit of a seed laboratory in England.
- SRTB staff members gave at least 14 presentations at various seed testing, national and regional seed control, seed certification, and seed industry meetings.
- We demonstrated our laboratory procedures and explained our regulatory operations to 40 officials representing 10 delegations from 9 countries.
- We checked approximately 1,500 proposed variety names for compliance with the FSA and cleared 1,100 of those for use as variety names.
- We evaluated 2,369 samples of 8 different crops for trueness-to-variety.
- We provided 1,687 specimens from the Reserve Seed Collection to international, Federal, State, and private seed laboratories.
- We published four quarterly issues of the "Items of Interest in Seed Control" that were mailed each quarter to approximately 320 seed control, seed testing, and seed certification officials, and to other interested parties.
- We distributed over 800 copies of the March 2000 edition of the "State Noxious-Weed Seeds Recognized in the Administration of the Federal Seed Act."



## JANUARY 11, 2001--NOXIOUS-WEED SEED EFFECTIVE DATE

Beginning January 11, 2001, noxious-weed seeds regulated by the Federal Seed Act (FSA) will include the Federal noxious-weed seeds and bulblets shown in section 201.16(b) of the FSA Regulations. The listed weed kinds and other information can also be found starting on page ii of the March 2000 issue of "State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act."

The noxious weed kinds at issue apply to their presence in **both agricultural and vegetable seed**. Seed containing seeds or bulblets of any of these kinds are prohibited from being transported or delivered for transportation in interstate commerce. **No tolerance will be applied if seeds or bulblets of these kinds are present.**

Other amendments to the FSA Regulations went into effect on February 10, 2000 (30 days after their publication in the Federal Register). The effective date of section 201.16(b) was set for one year after publication in the Federal Register so that seed suppliers could ensure that their businesses would be in compliance and that seed already packaged and labeled could be distributed.

For your convenience, the text of Section 201.16(b) is reprinted below:

(b) Seeds or bulblets of the following plants shall be considered noxious-weed seeds in agricultural and vegetable seeds transported or delivered for transportation in interstate commerce (including Puerto Rico, Guam, and the District of Columbia). Agricultural or vegetable seed containing seeds or bulblets of these kinds shall not be transported or delivered for transportation in interstate commerce. Noxious-weed seeds include the following species on which no tolerance will be applied:

*Aeginetia* spp.

*Ageratina adenophora* (Spreng.) King and H.E. Robins.

*Alectra* spp.

*Alternanthera sessilis* (L.) DC.

*Asphodelus fistulosus* L.

*Avena sterilis* L. (including *Avena ludoviciana* Dur.)

*Azolla pinnata* R. Br.

*Borreria alata* (Aubl.) DC.

*Carthamus oxyacanthus* M. Bieb.

*Chrysopogon aciculatus* (Retz.) Trin.

*Commelina benghalensis* L.

*Crupina vulgaris* Cass.

*Digitaria abyssinica* Stapf. (= *D. scalarum* (Schweinf.) Chiov.)

*Digitaria velutina* (Forsk.) Beauv.

*Drymaria arenarioides* Roem. and Schult.

*Eichhornia azurea* (Sw.) Kunth

*Emex australis* Steinh.

*Emex spinosa* (L.) Campd.

*Galega officinalis* L.

*Heracleum mantegazzianum* Sommier & Levier

*Hydrilla verticillata* (L. f.) Royle



*Hygrophila polysperma* T. Anders.  
*Imperata brasiliensis* Trin.  
*Imperata cylindrica* (L.) Raeusch.  
*Ipomoea aquatica* Forsk.  
*Ipomoea triloba* L.  
*Ischaemum rugosum* Salisb.  
*Lagarosiphon major* (Ridley) Moss  
*Leptochloa chinensis* (L.) Nees  
*Limnophila sessiliflora* (Vahl) Blume  
*Lycium ferocissimum* Miers  
*Melaleuca quinquenervia* (Cav.) Blake  
*Melastoma malabathricum* L.  
*Mikania cordata* (Burm. f.) B.L. Robins.  
*Mikania micrantha* H.B.K.  
*Mimosa invisa* Mart.  
*Mimosa pigra* L. var. *pigra*  
*Monochoria hastata* (L.) Sloms-Laub.  
*Monochoria vaginalis* (Burm. f.) K.B. Presl  
*Nassella trichotoma* (Nees) Arechavaleta  
*Opuntia aurantiaca* Lindl.  
*Orobanche* spp.  
*Oryza longistaminata* A. Cheval. and Roehr.  
*Oryza punctata* Steud.  
*Oryza rufipogon* Griff.  
*Ottelia alismoides* (L.) Pers.  
*Paspalum scrobiculatum* L.  
*Pennisetum clandestinum* Chiov.  
*Pennisetum macrourum* Trin.  
*Pennisetum pedicellatum* Trin.  
*Pennisetum polystachion* (L.) Schult.  
*Prosopis alata* R.A. Philippi  
*Prosopis argentina* Burkart  
*Prosopis articulata* S. Watson  
*Prosopis burkartii* Munoz  
*Prosopis caldenia* Burkart  
*Prosopis calingastana* Burkart  
*Prosopis campestris* Griseb.  
*Prosopis castellanosi* Burkart  
*Prosopis denudans* Benth.  
*Prosopis elata* (Burkart) Burkart  
*Prosopis farcta* (Russell) Macbride  
*Prosopis ferox* Griseb.  
*Prosopis fiebrigii* Harms  
*Prosopis hassleri* Harms  
*Prosopis humilis* Hook. and Arn.  
*Prosopis kuntzei* Harms  
*Prosopis pallida* (Willd.) H.B.K.  
*Prosopis palmeri* S. Watson  
*Prosopis reptans* Benth. var. *reptans*



*Prosopis rojasiana* Burkart  
*Prosopis ruizlealii* Burkart  
*Prosopis ruscifolia* Griseb.  
*Prosopis sericantha* Hook. and Arn.  
*Prosopis strombulifera* (Lam.) Benth.  
*Prosopis torquata* (Lagasca) DC.  
*Rottboellia cochinchinensis* (Lour.) Clayton (= *R. exaltata* (L.) L.f.)  
*Rubus fruticosus* L. (complex)  
*Rubus moluccanus* L.  
*Saccharum spontaneum* L.  
*Sagittaria sagittifolia* L.  
*Salsola vermiculata* L.  
*Salvinia auriculata* Aubl.  
*Salvinia biloba* Raddi  
*Salvinia herzogii* de la Sota  
*Salvinia molesta* D.S. Mitchell  
*Setaria pallide-fusca* (Schumach.) Stapf and Hubb.  
*Solanum torvum* Sw.  
*Solanum viarum* Dunal  
*Sparganium erectum* L.  
*Striga* spp.  
*Tridax procumbens* L.  
*Urochloa panicoides* Beauv.

## IDENTIFICATION OF FEDERAL NOXIOUS-WEED SEEDS

Most of the Federal noxious-weed species are not known to occur in the United States and therefore are not likely to be found in domestic seed samples. However, a few are found either as recent invasive species (e.g., *Solanum viarum*) or as ornamentals (e.g., *Avena sterilis*). Although section 201.16(b) of the FSA Regulations does not pertain to the interstate movement of these species as ornamentals or to their occurrence in flower seed, the USDA Animal and Plant Health Inspection Service (APHIS) does require a permit in such cases. Information on how to obtain an APHIS permit is given elsewhere in this issue in an article by Polly Lehtonen.

Seeds of almost all of these species are illustrated in "Identification of Disseminules Listed in the Federal Noxious Weed Act," USDA ARS Technical Bulletin 1719, by Charles R. Gunn and Carole A. Ritchie. At this time it was printed in 1988, complimentary copies of this 313-page paperback book were distributed to seed laboratories. If your laboratory does not have a copy, it is still available for \$70 plus \$5 shipping and handling from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (phone 800-553-6847; order No. PB89142772). APHIS has a limited number of seed identification notebooks available; information on how to obtain one is in Polly Lehtonen's article.



## APHIS PERMIT REQUIREMENTS FOR FEDERAL NOXIOUS WEEDS

Submitted by Polly Lehtonen, Botanist  
USDA-APHIS-PPQ  
Permits and Risk Assessment Staff

Under the Federal noxious weed regulations (7 CFR 360), any importation or interstate movement of a listed noxious weed requires a permit. APHIS issues noxious weed permits when the movement, under conditions specified in the permit, does not pose a risk of dissemination in the United States. APHIS issues permits mostly for research in containment facilities, for scientific study, and for educational purposes. No permit is necessary if the seeds have been devitalized (by microwave, heat treatment, or other means, and verified by tetrazolium or germination testing).

The permit required for Federal noxious weeds is Plant Protection and Quarantine (PPQ) form 526, "Permit for Application to Move Live Plant Pests and Noxious Weeds." You can download the form from our web site at <http://www.aphis.usda.gov/ppq/ss/permits/pests/> or call the automated retrieval system at 301-734-4327 and follow the instructions for plant pest permits. When the automated system asks you for the form number, enter 0004. You will be prompted to enter your fax number and the system transmits the form to you shortly after the call.

Complete section A of the PPQ form 526 and mail the form to:

USDA-APHIS-PPQ  
Permits and Risk Assessment  
4700 River Road, Unit 133  
Riverdale, MD 20737

Alternately, you may send it by fax to 301-734-8700 or 301-734-4300

**Note:** APHIS has developed a noxious weed identification collection of Federal noxious-weed seeds (or slides when seeds are not available) in notebook form. Many state seed laboratories have already requested and received a copy. APHIS will try to supply a reference notebook to each state seed laboratory that requests one, as long as our supplies last. You may request a notebook by contacting Mrs. Rebecca Norris of the PPQ Plant Protection Center in Oxford, NC, by E-mail at [Rebecca.Norris@usda.gov](mailto:Rebecca.Norris@usda.gov). You will not need a permit to receive this notebook because the seeds are devitalized.

- We want to thank Polly Lehtonen of the Animal and Plant Health Inspection Service (APHIS) for writing this article. If a seed analyst needs to obtain samples of Federal noxious-weed seeds for a seed herbarium, please follow the instructions provided.

## UTAH NOXIOUS-WEED SEEDS MISSING ON FEDERAL PUBLICATION

Somehow our publication "State Noxious-Weed Seed Requirement Recognized in the Administration of the Federal Seed Act" failed to include four Utah restricted noxious weeds. They are dodder, halogeton, jointed goatgrass, and wild oat. We will correct our error in January with the 2001 issue of the noxious-weed list.



## DAY FOR FINAL GERMINATION COUNT OF KENTUCKY BLUEGRASS SEED

At the Annual Meeting of the Association of Official Seed Analysts (AOSA) held in June, a rule proposal was adopted to change the day for the final count of Kentucky bluegrass germination from 28 days to 21 days. This change in the AOSA Rules went into effect on October 1. At this time, the Federal Seed Act (FSA) Regulations have not been amended to incorporate this change. For purposes of enforcement of the FSA, the Seed Regulatory and Testing Branch will continue to germinate Kentucky bluegrass seed for 28 days. We also routinely make a 21-day count. If any significant difference occurs between 21 days and 28 days in our standard germination tests of Kentucky bluegrass seed, that will be noted and taken into consideration for any action taken under the FSA.

## PROCEDURES FOR TESTING ROUNDUP™ TOLERANT CORN

In the Fall 1997 and Summer 1998 issues of "Items of Interest in Seed Control," we summarized preliminary procedures for testing corn for tolerance to the herbicide Liberty™ (glufosinate ammonium). Those procedures involved herbicide solution as a spray and as a seed soak. The following are similar procedures we developed for testing corn tolerant to Roundup™ (glyphosate):

### Seed Soak Procedure

#### Seed Imbibition

We moisten germination towels with water as we would for use in a corn germination test. We found it convenient to use 12 by 26-inch towels (regular weight). With 2 layers of towels on a flat surface, place 50 seeds on the towels; at this point it is not critical where the seeds are on the towel. Cover the seeds with two additional germination towels and roll or fold the towels as for a germination test. Five sets of towels are bound together with rubber bands and placed upright in an 8 by 14-inch plastic bag. Four sets are used for the herbicide soak and one set for a water control. The five sets of towels are placed in a germinator at 25° C for 24 to 30 hours to initiate imbibition (swelling and softening of seed). Light intensity is not a critical factor, but the length of the imbibition period among various seed lots may affect the test. We have observed that corn varieties with round seed kernels seem to imbibe more slowly than flat-seeded varieties.

#### Seed Soak

Examine the imbibed seeds and discard any hard, moldy, or broken seeds before placing (gently) 50 seeds in a 100-mm Petri dish. Immediately add about 25 ml of 2400-PPM Roundup™ solution to each dish. This amount should nearly cover the seeds. It is convenient to obtain commercial Roundup™ with 0.96 percent active ingredient and mix 50 ml with 150 ml of tap water. The exact concentration depends on whether the Roundup™ product used contains a wetting agent. If the Roundup™ used does not contain a wetting agent, a concentration in excess of 2400 PPM may be necessary for the test to be successful. Seeds for the water control are placed in a Petri dish with 25 ml of tap water instead of herbicide. Allow the imbibed seeds to soak 1 hour at room temperature.



### Replanting

Drain most of the solution from the Petri dishes, and using protective gloves, replant the seeds, 25 per towel. Laying two towels down, place the seeds in a single row 1 or 2 inches below and parallel to the top edge of the towels. Fold the bottom edge of the towels up to cover the seeds. Group the towels, containing the planted seeds, in sets of four per plastic bag and place in a germinator set at either 25° C or 20-30° C. Make observations 4 to 6 days after the soak treatment.

### Evaluation

Susceptible seedlings are identified by a significantly shortened shoot and shortened primary root with no secondary root development. Tolerant seedlings show almost no effect from the seed soak and have long shoots and long primary roots with numerous secondary roots.

## **Spray Method**

### Planting Samples

We moisten germination towels with water as we would for a regular germination test. Plant seeds (25 seeds on a 12 by 26-inch towel) about 1 ½ inches from the top edge of the towel, folding up the bottom edge to cover the seeds. Fold or roll the towels as you would for a germination test while being careful that seeds remain in the location in which they were placed. Four replicates of rolled towels are bound together with rubber bands, one just below the line of seeds and the other near the bottom of the towels. Each set of 4 rolled towels is placed upright in an 8 by 14-inch plastic bag.

### Growth Conditions

Put the upright rolled towels in a germinator or growth chamber at 25° C with high light intensity for at least 16 hours a day. Adding some water to the plastic bags periodically may be necessary to keep the sample from drying out.

### Preparation of Herbicide Solution

We prepare a 2400-PPM solution of Roundup™ as we would for the seed soak method. Again, it is important to note that if the Roundup™ solution you are using does not contain a wetting agent, it will be necessary to use a higher concentration. Prior to spraying the seedlings, pour the solution into a 100-ml graduated cylinder. Insert the tube of a pump sprayer (the kind used to spray window cleaner) into the graduated cylinder.

### Herbicide Treatment of Seedlings

On the fifth day after planting, or preferably when the leaves have unrolled and expanded, we unroll the towels and fold the top two layers back exposing the germinating seedlings. Remove and discard any dead, moldy, or abnormal seedlings. Adjust the remaining seedlings as needed so that the seeds are in a straight line and the leaves of the seedlings extend over the top edge of the germination towels. Before spraying with herbicide solution, fold the towels back to expose the seeds and shoots, keeping the roots covered. Spray until saturated. Record the decrease in the level of herbicide in the graduated cylinder after spraying the seedlings in one set of rolled towels. Spray the same amount of herbicide on the seedlings in each succeeding set of towels. We found 50 ml or less would saturate 400 seedlings. Spraying should be



done in an area away from the germination test area to avoid herbicide injury to other test samples. Return the rolled towels into the plastic bags. To allow time for absorption of the herbicide solution, we left the tests out on a laboratory bench for about an hour before returning them to the growth chamber.

#### Evaluation

The seedlings can be evaluated 7 to 10 days after spraying. Resistant seedlings have normal green, expanded primary leaves; however, some leaf tips may show a small amount of yellowing. Susceptible seedlings appear stunted and yellow-green in color with yellow-green primary leaves. After several additional days, the susceptible seedlings turn brown.

#### Observation

We have observed that once susceptible seedlings have been sprayed, growth seems to be arrested, with no further elongation in either the shoot or the roots. Tolerant seedlings continued to grow with the leaves expanding and the roots continuing to elongate.

For each test the Seed Regulatory and Testing Branch performs in determining herbicide resistance, check samples of known resistant and non-resistant varieties are tested for comparison purposes. Also, a water control sample treated the same as the samples soaked in Roundup™ is planted for the sample in question and for each check sample.

A germination test determines the percentage of seeds germinating normally under favorable conditions. Comparing a germination test with tests that introduce a stress variable (for example, seed soaks with water or Roundup™ or the Roundup™ spray) allows the seed analyst to determine if the stress variable has a negative impact on the seed. Because germination test conditions have been altered, water control samples and samples soaked or sprayed with Roundup™ do not substitute for the germination test.

### **SERVICE TESTING**

In addition to regulatory testing done under the Federal Seed Act (FSA), the Seed Regulatory and Testing Branch also tests agricultural and vegetable seeds as a service authorized by the Agricultural Marketing Act. This voluntary service is available to anyone for a fee, currently \$44.40 per hour. Those submitting seed samples may request that they be tested for factors such as purity, germination, noxious-weed seeds, moisture content, and other standardized tests. The test results are reported on a Federal Seed Analysis Certificate.

Many companies involved in seed export submit samples to us for testing under this program. Some samples may be submitted for a company's internal quality assurance program. Samples are tested according to the Rules specified by the customer: International Rules for Seed Testing (ISTA), Association of Official Seed Analysts (AOSA) Rules for Testing Seeds, or FSA Regulations.



Anyone submitting a sample for testing under this program should include the following information with the sample:

- Company Name and Address
- Kind and Variety
- Lot number
- Other identifying marks
- Weight of lot, either in kg or lbs.
- Weight of Shipment, either in kg or lbs.
- Export to which country (if applicable)
- Testing Rules needed, ISTA, AOSA, or FSA
- Requested tests such as germination, purity, noxious, moisture, etc.
- Seed treatment substances, if any
- Special instructions
- Contact person's name, phone number, and fax number

The required submitted sample size and fee chart for each kind of seed we test are found on our web page: <http://www.ams.usda.gov/lsg/seed/servicetesting.htm>. (Note: This web address previously had an underscore "\_" between the words service and testing.) The quantities listed are the minimum amounts for treated or untreated seed samples being submitted for purity, noxious, and germination tests by the ISTA Rules.

Moisture tests and tests on pelleted or coated seed have special requirements for submitted sample size. For moisture tests, an additional 25 grams is required and the seed must be submitted in a moisture-proof container. For pelleted seed, the equivalent of 7,500 pellets is required for purity and germination tests by ISTA Rules. If a noxious-weed seed examination is requested, 10,000 pellets should be submitted.

In some cases, one seed company submits samples for testing on behalf of another company. If third-party billing is requested, written authorization from the company to be billed must accompany the seed.

Samples for service testing should be sent to:

- Testing Section
- Seed Regulatory and Testing Branch
- Building 306, Room 213, BARC-East
- Beltsville, Maryland 20705-2325
- Telephone: 301-504-8089
- Fax: 301-504-8098

## **RESERVE SEED COLLECTION INFORMATION**

Our Reserve Seed Collection (RSC) consists of seeds of more than 700 different species. The Seed Regulatory and Testing Branch (SRTB) is currently accepting seed donations for the RSC. In the Summer 1997 issue of "Items of Interest in Seed Control" we published two lists of seed species needed for the RSC. Over the three years since we published that request, the SRTB has received many seed samples that will allow us to add several new species to the RSC.



The RSC still needs seed samples of the following species that previously have been available:

*Brassica rapa* subsp. *trilocularis* (syn. *Brassica rapa* var. *Sarson*) - field mustard  
*Bromus rigidus* - ripgut brome  
*Carex frankii* - Frank's sedge  
*Cenchrus incertus* - coastal sandbur  
*Cucumeropsis mannii* - white-seed-melon  
*Hyptis suaveolens* - wild spikenard  
*Ilex cornuta* - horned holly; Chinese holly  
*Lathyrus aphaca* - yellow-pea; yellow vetchling  
*Lespedeza juncea* - Siberian lespedeza  
*Lotus unifoliolatus* (syn. *Lotus purshianus*) - deervetch; prairie trefoil  
*Phaseolus coccineus* - scarlet runner bean  
*Simmondsia chinensis* - jojoba  
*Artemisia tridentata* - big sagebrush  
*Eclipta prostrata* - yerba de tajo  
*Ginkgo biloba* - maidenhair tree; ginkgo  
*Senecio jacobaea* - tansy ragwort

Name changes have been made where appropriate. Please make note of these name changes for future reference. The SRTB would like to thank all who have donated seed for the RSC and please keep the samples coming.

Send all RSC donations to:

Leigh Wiltison-Allen  
Seed Regulatory and Testing Branch  
LS, AMS, USDA  
Building 306, Room 213, BARC-East  
Beltsville, Maryland 20705-2325

## **INSPECTOR TRAINING SEMINAR**

Seed Regulatory and Testing Branch Marketing Specialist Steve Hurst attended a portion of the "Buckeye Inspector Training Seminar 2000" held in Granville, OH, September 12-14. The Ohio Department of Agriculture coordinated the seminar. The 3-day seminar was attended by more than 80 State inspectors and supervisors of agricultural commodities such as feed, seed, and fertilizer. The participants came from 19 states.

The morning and afternoon of September 14 was devoted mostly to seed related matters. Hurst spoke on the Federal Seed Act and the cooperative relationship between State programs and USDA's Agricultural Marketing Service. Brett Groves from the Office of State Chemist and Seed Commissioner, Purdue University, spoke on the subject "Seed Sampling." Charles Dale, Supervisor, Weed and Seed Inspection, Minnesota Department of Agriculture, addressed "Sample Integrity - Laboratory Procedures." David Buckingham, Coordinator, Seed Regulatory Program, University of Kentucky, spoke on several issues including complaint investigations, checking records, and public relations. During the seminar, the participants attended training sessions for other topics including



professionalism, oral communications, risk management, investigative techniques, handling stress, safety, and sampling techniques for feed and for fertilizer.

The Association of American Feed Control Officials (AAFCO), the Association of American Plant Food Control Officials (AAPFCO), and the Association of American Seed Control Officials (AASCO) sponsored the seminar.

### **SEED INSPECTOR TRAINING IN COLORADO**

On October 6, 2000, Seed Regulatory and Testing Branch Marketing Specialist Harold Laswell participated as one of the instructors at a multi-state Seed Inspector Training program held in Fort Collins, CO. Fifteen seed inspectors and other State personnel from California, Colorado, Idaho, Washington, and Wyoming attended the sessions. Inspectors are cross-trained and are given the responsibility of inspecting numerous commodities including seed.

The purpose of Laswell's part of the training was to teach the State inspectors recommended steps needed in sampling seed to insure that policies and procedures are followed that are necessary for Federal Seed Act (FSA) cases to be made on interstate shipment violations. Topics that were covered included the purpose of the State and Federal Cooperative Agreement, sampling techniques and procedures, recommended equipment use, labeling required under the FSA, minimum sample sizes, Federal actions taken on State-submitted complaints, and Plant Variety Protection Act violations enforced under Title V of the FSA.

### **ISTA ACCREDITATION AUDIT IN ENGLAND**

Seed Regulatory and Testing Branch (SRTB) Botanist Susan Maxon traveled to Cambridge, England. On August 21 and 22, 2000, she assisted with the accreditation audit of the Official Seed Testing Station in Cambridge. She served as the technical assessor for the audit conducted by the International Seed Testing Association (ISTA). As the ISTA designated laboratory for the United States, the SRTB will also be undergoing a reaccreditation audit by ISTA before the end of the year.

### **FEDERAL SEED ACT CASE SETTLED**

The following case was settled administratively under the Federal Seed Act between July 1 and September 30, 2000. Under the administrative settlement procedure, the SRTB and the firm agreed to settle the case for the amount specified with the firm neither admitting nor denying the charges:

- Barenbrug USA, Tangent, OR, has paid \$29,225 for a case involving 55 seed shipments. The alleged violations, while not the same for all shipments, were false labeling as to purity, variety name, germination percentage, and test date; failure to test all components in a seed mixture for germination within the prescribed period prior to interstate shipment; false labeling of the rate of occurrence of noxious-weed seeds; false labeling as to being a "lot of seed"; shipping seed containing noxious-weed seeds in excess of State's limits; failure to show the presence of noxious-weed seeds and the rate of occurrence; failure to show the required labeling for all components in a



mixture; failure to keep records establishing the variety; and failure to keep required records. Seed regulatory officials in Florida, Kentucky, Maryland, North Carolina, Pennsylvania, Tennessee, Texas, and Virginia cooperated in the initial sampling and inspection.

### **ADDRESS CORRECTION REQUESTED**

If you find an error in your name, title, organization, or address on this or any other mail you receive from us, please send the correction and tell us on what correspondence the mistake was made. If you no longer wish to be on a mailing list, let us know that too.

Seed control officials: Please inform us when higher level personnel (i.e., Secretaries, Commissioners, Directors, etc.) changes are made, including address and title changes, so we can promptly update our records and mailing lists.

### **SUGGESTIONS FOR THE ITEMS OF INTEREST IN SEED CONTROL**

We welcome ideas or articles you feel should be included in this publication. If you wish to submit an article, please send it to:

Don Dreyer  
Attention: Items of Interest in Seed Control  
Seed Regulatory and Testing Branch  
Livestock and Seed Program, AMS, USDA  
Room 209, Building 306, BARC-East  
Beltsville, Maryland 20705-2325  
E-mail: louis.dreyer@usda.gov  
Fax: 301-504-8098

### **STATE NOXIOUS-WEED SEED PUBLICATION**

We are out of paper copies of the "State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act." It is available on our home page <http://www.ams.usda.gov/lsg/seed/lis-sd.htm>. We may not be able to print paper copies of the 2001 revision because of budget constraints. It will be available on the web site.

### **OUR LAST PAPER ISSUE?**

This may be the last printed issue of the "Items of Interest in Seed Control" that will be available to our readers. Because of a tightening budget scenario, the cost of printing the Items of Interest may become prohibitive. If that is the case, it will still be available quarterly via the Internet on our home page <http://www.ams.usda.gov/lsg/seed/lis-sd.htm>.

We regret any inconvenience this situation may cause our readers.



## HOW TO RECEIVE A PUBLICATION REMINDER

Since paper copies of the "Items of Interest in Seed Control" and the "State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act" are no longer going to be mailed to our readers, we have established an electronic subscription option for your use. At our web page (<http://www.ams.usda.gov/lsg/seed/lis-sd.htm>), you can subscribe to our publications. If you subscribe, you will receive a quarterly E-mail message when a new edition of the Items of Interest is posted to the web page and a yearly E-mail when the Noxious-Weed Seed list is changed and posted. The E-mail you receive will give you the option of unsubscribing or viewing the publication on our web page.



## RYEGRASS FLUORESCENCE LIST

We have had no changes from the National Grass Variety Review Board since our last issue.

| Perennial<br>Ryegrass<br><u>Variety Name</u> | Percent<br>Varietal<br><u>Fluorescence</u> | Perennial<br>Ryegrass<br><u>Variety Name</u> | Percent<br>Varietal<br><u>Fluorescence</u> |
|--|--|--|--|
| 246  | 0.27%                                      | Derby Supreme                                | 2.85%                                      |
| 2CB  | 1.97%                                      | Dillon                                       | 4.14%                                      |
| 856  | 0.87%                                      | Divine                                       | 3.09%                                      |
| 89-90  | 2.15%                                      | DS95-201 (Enchanted) <sup>1</sup>            | 1.12%                                      |
| 90-14 <sup>1</sup>                           | 7.12%                                      | Edge   | 1.73%                                      |
| 96-KSOS-L-1-PR-WVPB-C-24                     | 6.50%                                      | Elegance                                     | 1.51%                                      |
| A + 96 <sup>1</sup>                          | 0.92%                                      | Elf  | 0.75%                                      |
| Academy                                      | 2.33%                                      | Elite  | 4.84%                                      |
| Accent                                       | 0.56%                                      | Envy   | 0.22%                                      |
| Accolade                                     | 4.83%                                      | Equal  | 1.98%                                      |
| Accord                                       | 4.08%                                      | Evening Shade                                | 1.17%                                      |
| Achiever                                     | 0.93%                                      | Excel <sup>3</sup>                           | 1.53%                                      |
| Advent                                       | 0.14%                                      | Express                                      | 4.00%                                      |
| Affinity                                     | 0.77%                                      | Fiesta II <sup>3</sup>                       | 1.14%                                      |
| Agresso                                      | 2.00%                                      | Gator  | 0.88%                                      |
| All * Star                                   | 0.47%                                      | Gettysburg                                   | 2.74%                                      |
| Allaire II                                   | 1.15%                                      | Goalkeeper                                   | 0.82%                                      |
| APM  | 0.59%                                      | Greenland                                    | 1.20%                                      |
| Aquarius                                     | 0.97%                                      | Grimalda                                     | 2.00%                                      |
| Archer                                       | 1.51%                                      | Headstart                                    | 2.09%                                      |
| Ascend                                       | 3.09%                                      | Imagine                                      | 1.31%                                      |
| ASP410                                       | 0.18%                                      | ISI-RUPR (Gator II) <sup>1</sup>             | 2.50%                                      |
| Assure                                       | 0.72%                                      | Jet  | 0.84%                                      |
| Bedford                                      | 1.40%                                      | Jiffie                                       | 6.06%                                      |
| Bella  | 0.65%                                      | JR-128 (Spyglass) <sup>1</sup>               | 1.19%                                      |
| Blackhawk                                    | 1.17%                                      | JR-151 <sup>1</sup>                          | 2.37%                                      |
| Blazer III                                   | 1.18%                                      | JR-265 <sup>1</sup>                          | 1.42%                                      |
| Boardwalk                                    | 2.72%                                      | JR-317 (Superfly) <sup>1</sup>               | 1.32%                                      |
| Breeze                                       | 1.57%                                      | Laredo                                       | 0.53%                                      |
| Brightstar                                   | 1.79%                                      | Legacy                                       | 0.37%                                      |
| Brightstar II                                | 2.24%                                      | Lindsay                                      | 1.72%                                      |
| Buccaneer                                    | 7.44%                                      | Line Drive                                   | 2.72%                                      |
| Buccaneer II                                 | 5.48%                                      | Linn   | 5.00%                                      |
| CIS-MBH                                      | 1.27%                                      | Lowgrow <sup>3</sup>                         | 1.31%                                      |
| C-21   | 6.28%                                      | Lowgrow II                                   | 1.35%                                      |
| Caddieshack <sup>1</sup>                     | 0.88%                                      | LRF-94-C8 <sup>1</sup>                       | 0.64%                                      |
| Caliente                                     | 0.74%                                      | LTP-3351 (Exacta) <sup>1</sup>               | 1.22%                                      |
| Calypso                                      | 1.29%                                      | LTP-95-1X4551 (Affirmed) <sup>1</sup>        | 2.59%                                      |
| Calypso II                                   | 0.47%                                      | LTP-DLM (Churchill) <sup>1</sup>             | 2.93%                                      |
| Catalina                                     | 3.18%                                      | Lynx   | 4.19%                                      |
| Cathedral                                    | 0.85%                                      | MB 48 (Wilmington) <sup>1</sup>              | 0.17%                                      |
| Chaparral                                    | 1.62%                                      | Magic  | 1.21%                                      |
| Charger II                                   | 0.54%                                      | Majesty                                      | 1.59%                                      |
| Charisma                                     | 2.39%                                      | Manhattan II <sup>3</sup>                    | 0.65%                                      |
| Chatham <sup>1</sup>                         | 2.11%                                      | Manhattan 3 <sup>3</sup>                     | 0.88%                                      |
| Citation III                                 | 0.96%                                      | Mardi Gras                                   | 1.07%                                      |
| Commander                                    | 1.02%                                      | Monterey                                     | 2.64%                                      |
| Cutter                                       | 1.65%                                      | Morningstar                                  | 0.87%                                      |
| Dancer                                       | 0.78%                                      | Mulligan                                     | 1.86%                                      |
| Dandy  | 2.00%                                      | Navajo <sup>3</sup>                          | 0.37%                                      |
| Delaware Dwarf                               | 2.60%                                      | Newlinn                                      | 5.85%                                      |



|   |        |
|---|--------|
| NightHawk                               | 1.39%  |
| Nobility                                | 7.53%  |
| Nomad                                   | 1.03%  |
| Nova                                    | 1.00%  |
| Omega 3                                 | 0.73%  |
| Omni                                    | 0.51%  |
| Pageant                                 | 2.22%  |
| Palmer                                  | 1.04%  |
| Palmer II                               | 1.51%  |
| Palmer III                              | 0.23%  |
| Panther                                 | 1.18%  |
| Passport <sup>3</sup>                   | 1.06%  |
| Patriot II                              | 0.42%  |
| Pearl                                   | 1.86%  |
| Pegasus                                 | 2.41%  |
| Pennant                                 | 0.50%  |
| Pennant II                              | 1.63%  |
| Phantom                                 | 2.19%  |
| Pick Lp I-93 (Pleasure XL) <sup>1</sup> | 1.11%  |
| Pick Lp Q-93 <sup>1</sup>               | 6.44%  |
| Pleasure                                | 4.09%  |
| PR8820                                  | 0.79%  |
| Prelude                                 | 1.72%  |
| Prelude II                              | 2.25%  |
| Prelude III                             | 0.59%  |
| Prizm                                   | 0.71%  |
| Protocol                                | 4.30%  |
| Quickstart                              | 0.18%  |
| R2                                      | 1.25%  |
| Racer                                   | 1.23%  |
| Regency                                 | 0.99%  |
| Repell                                  | 0.33%  |
| Repell II <sup>3</sup>                  | 1.56%  |
| Repell III                              | 0.80%  |
| Reveille                                | 2.00%  |
| Riviera                                 | 0.58%  |
| Riviera II                              | 1.08%  |
| Roadrunner                              | 2.53%  |
| Rodeo II                                | 2.47%  |
| Rosalin                                 | 3.26%  |
| Saturn II                               | 0.85%  |
| Seville <sup>3</sup>                    | 0.33%  |
| Sherwood                                | 1.08%  |
| Shining Star                            | 0.10%  |
| Sonata                                  | 1.20%  |
| SR 4100 <sup>3</sup>                    | 0.37%  |
| SR 4200                                 | 0.34%  |
| Stallion Select                         | 2.37%  |
| Stallion Supreme                        | 1.16%  |
| Stardance                               | 1.90%  |
| Statesman                               | 1.27%  |
| Statesman II                            | 8.42%  |
| Sunshine                                | 2.65%  |
| Target                                  | 3.28%  |
| Tonga                                   | 11.53% |
| TopGun                                  | 0.54%  |

|                                |        |
|--------------------------------|--------|
| Top Hat                        | 0.77%  |
| Topeka                         | 2.34%  |
| Tove                           | 17.48% |
| Twister                        | 3.85%  |
| Vantage                        | 2.19%  |
| Vivid                          | 1.24%  |
| Wind Dance                     | 1.17%  |
| Wind Star                      | 0.47%  |
| Wizard <sup>3</sup>            | 2.57%  |
| WVPB-93-KFK <sup>1</sup>       | 3.84%  |
| WVPB-PR-C-2, C-2 <sup>1</sup>  | 8.65%  |
| WVPB-PR-Koos-95-9 <sup>1</sup> | 6.85%  |
| WVPB-PR-RS-2 <sup>1</sup>      | 1.59%  |
| Yorktown III                   | 1.42%  |

| Annual Ryegrass       | Percent                      |
|-----------------------|------------------------------|
| <u>Variety Name</u>   | <u>Varietal Fluorescence</u> |
| Florida 80            | 98.89%                       |
| Grazer                | 99.78%                       |
| Gulf                  | 99.02%                       |
| Jackson               | 98.80%                       |
| Magnolia <sup>2</sup> | ---                          |
| Marshall              | 96.00%                       |
| Rio <sup>1</sup>      | 98.97%                       |
| Surrey                | 98.91%                       |
| TAM 90                | 98.45%                       |

<sup>1</sup> Experimental Designation and/or Variety

<sup>2</sup> Exempt from varietal fluorescence testing calculations.

<sup>3</sup> The NGVRB is now listing OECD synonym names. **These names are not acceptable for sale in the United States** and are included for informational purposes. The variety and its OECD synonym shown in italics are: Excel--*Romadera*, Fiesta II--*Pickwick*, Lowgrow--*Lex86*, Manhattan II--*Numan*, Manhattan 3 *Triman*, Navajo--*Comanche*, Passport--*Romeo*, Repel II--*Verdi*, Seville--*Leonardo*, SR4100--*Athena*, and Wizard--*Sardinero*.



**Additions and Deletions  
Of  
Plant Variety Protection  
Certificates**





PLANT VARIETY PROTECTION CERTIFICATES  
(ISSUED August 1, 2000, through October 15, 2000)

| KIND<br>VARIETY                 | APPLICANT             | TITLE V 1994<br>(GEN.) PVPA |
|---------------------------------|-----------------------|-----------------------------|
| WATERMELON<br>Summer Flavor-800 | Abbott and Cobb, Inc. | Y                           |

(\*) No limit to the number of generations of certified seed beyond breeders seed.



PLANT VARIETY PROTECTION CERTIFICATES  
(EXPIRED August 1, 2000, through October 15, 2000)

| KIND<br>VARIETY | APPLICANT                 | TITLE V<br>(GEN.) | 1994<br>PVPA | KIND<br>VARIETY | APPLICANT               | TITLE V<br>(GEN.) | 1994<br>PVPA |
|-----------------|---------------------------|-------------------|--------------|-----------------|-------------------------|-------------------|--------------|
| BEAN, GARDEN    |                           |                   |              | WHEAT, COMMON   |                         |                   |              |
| Epoch           | Wilbur-Ellis Company      |                   |              | 5409            | Seed Research Division, | Y (3)             |              |
| Flamata         | Royal Sluis B.V.          |                   |              |                 | AgriGenetics Corp.      |                   |              |
| Goldie          | Novartis Seeds, Inc.      |                   |              | 830             | HybriTech Seed          |                   |              |
| BEAN, LIMA      |                           |                   |              | Klasic          | International, Inc.     |                   |              |
| Maffei 15       | Agri Sales, Inc.          |                   |              | Pike            | Novartis Seeds, Inc.    | Y (3)             |              |
| CAULIFLOWER     |                           |                   |              |                 | Curators of the         |                   |              |
| White Summer    | Sluis and Groot Research  |                   |              | WestBred 911    | University of Missouri  | Y (*)             |              |
| OAT             |                           |                   |              | WHEAT, DURUM    | Western Plant Breeders, |                   |              |
| Big Mac         | Novartis Seeds, Inc.      | Y (3)             |              | D-5003          | Inc.                    |                   |              |
| Mesquite        | Novartis Seeds, Inc.      | Y (3)             |              |                 |                         |                   |              |
| ORCHARDGRASS    |                           |                   |              |                 |                         |                   |              |
| Mobite          | Mommersteeg International |                   |              |                 | Germain's Seeds, Inc.   | Y (3)             |              |
|                 | B.V.                      |                   |              |                 |                         |                   |              |
| PEA             |                           |                   |              |                 |                         |                   |              |
| 260             | Green Giant Company       |                   |              |                 |                         |                   |              |
| 265             | Green Giant Company       | Y (*)             |              |                 |                         |                   |              |
| Dew             | Seminis Vegetable Seeds,  |                   |              |                 |                         |                   |              |
|                 | Inc.                      |                   |              |                 |                         |                   |              |
| Dual            | Seminis Vegetable Seeds,  |                   |              |                 |                         |                   |              |
|                 | Inc.                      |                   |              |                 |                         |                   |              |
| PEPPER          |                           |                   |              |                 |                         |                   |              |
| Orange Cayenne  | Tommy Bolack              | Y (*)             |              |                 |                         |                   |              |
| SOYBEAN         |                           |                   |              |                 |                         |                   |              |
| AP 230          | Advanta USA, Inc.         |                   |              |                 |                         |                   |              |
| B242            | Novartis Seeds, Inc.      |                   |              |                 |                         |                   |              |
| HP 2530         | Advanta USA, Inc.         |                   |              |                 |                         |                   |              |
| Vinton 81       | Iowa Agriculture and Home | Y (3)             |              |                 |                         |                   |              |
|                 | Economics Experiment      |                   |              |                 |                         |                   |              |
|                 | Station                   |                   |              |                 |                         |                   |              |
| TOMATO          |                           |                   |              |                 |                         |                   |              |
| Liberator       | Harris Moran Seed Company |                   |              |                 |                         |                   |              |
| Super Beefsteak | W. Atlee Burpee Company   |                   |              |                 |                         |                   |              |
| TURNIP          |                           |                   |              |                 |                         |                   |              |
| Royal Gem       | Harris Moran Seed Company |                   |              |                 |                         |                   |              |
| WATERMELON      |                           |                   |              |                 |                         |                   |              |
| Chubby Gray     | Coffey Seed Company       |                   |              |                 |                         |                   |              |
| Crimson Diamond | Coffey Seed Company       |                   |              |                 |                         |                   |              |
| WHEAT, COMMON   |                           |                   |              |                 |                         |                   |              |
| 2369            | NDSU Research Foundation  | Y (3)             |              |                 |                         |                   |              |

(\*) No limit to the number of generations of certified seed beyond breeders seed.





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